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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,341	12/29/2000	Mark J. Hampden-Smith	41890-01280	7916

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08/05/2003

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EXAMINER

KOSLOW, CAROL M

ART UNIT	PAPER NUMBER
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1755

19

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-19

Office Action Summary

Application No.

09/751,341

Applicant(s)

HAMPDEN-SMITH ET AL.

Examiner

C. Melissa Koslow

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 80-84, 86-88, 90-98, 100-106, 108-113, 116-120, 122-128, 131-133, 135-138 and 140-142 is/are rejected.
- 7) ☒ Claim(s) 139 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 16. 6) ☐ Other: _____

Continuation of Disposition of Claims: Claims pending in the application are 80-84,86-88,90-98,100-106,108-113,116-120,122-128,131-133 and 135-142.

Art Unit: 1755

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 June 2003 has been entered.

The provisional obviousness-type double patenting rejection over Patent Application Publication 2001/0042853 is withdrawn since this application has issued as U.S. Patent 6,555,022 and the issued claims do not teach or suggest the claimed devices. The rejections over Sanjurjo et al due applicants' argument that the all the claimed phosphors are were known to be used in the claimed cathodoluminescent devices as of the filing date of their provisional application.

Since applicants did not submit a petition within two months as required by options I and II of the Notice To File Missing Parts Of Nonprovisional Applicants and by the decision dismissing the petition, only the originally filed papers present in the PTO on 29 December 2000 are part of the application. Applicants are required to renumber the pages of the specification consecutively.

Figures 6 and 7 have been entered as an amendment, but are not considered part of the originally filed papers because applicants did not submit a petition within two months as required by options I and II of the Notice To File Missing Parts Of Nonprovisional Applicants and by the decision dismissing the petition.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

Art Unit: 1755

Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 80-82, 87, 90, 92, 97, 98, 102, 103, 113, 199-120, 122 and 123 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 57-67 of U.S. Patent No. 6,153,123. Although the conflicting claims are not identical, they are not patentably distinct from each other because the device claimed in 6,153,123 suggests those claimed in the present application.

Claims 57-67 is directed to a FED having the claimed structure and comprising sulfur containing substantially spherical phosphors having an average particle size of not greater than about 5 microns and a distribution where at least about 90% of the particles are not larger than twice the average particle size. FEDs are known to have an excitation source which has an excitation potential that is less than about 5 kV and the phosphors used in FEDs are known to be cathodoluminescent. The preferred average particle size is about 0.3-3 microns. The particles are coated where the coating substantially encapsulates the phosphors. The FED also has a pixel layer formed from the phosphors, where the thickness is not greater than about 3 times the average particle size. The phosphor can be ZnS doped with Ag, Cl, Cu and mixtures thereof or SrGa₂S₄:Eu.

Art Unit: 1755

Claims 80-84, 86-88, 90-98, 100-106, 108-113, 116-120, 122-128, 131-133, 135-138 and 140-142 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 of U.S. Patent No. 6,168,731.

Claims 1-38 of U.S. Patent No. 6,168,731 teach substantially spherical cathodoluminescent phosphors having an average particle size of about 0.1-10 microns and a distribution where at least about 90% of the particles are not larger than twice the average particle size. The claimed phosphors are composed of ZnS doped with Au, Al, Ag, Cl, Cu and mixtures thereof, $\text{SrGa}_2\text{S}_4\text{:Eu}$ and/or Ce, $\text{Y}_2\text{O}_2\text{S:Eu}$ and/or Tb, $\text{Zn}_2\text{SiO}_4\text{:Mn}$, where the amount is 0.05-2 at% Mn and $\text{Y}_2\text{SiO}_5\text{:Ce}$ and/or Tb. There is no teaching of the devices in which these phosphors are used. Applicants have admitted in their arguments over Sanjurjo et al that it was known in the art, as of 24 February 1998, that cathodoluminescent phosphors were conventionally used in CRTs for projection televisions, CRTs for televisions, heads-down displays, heads-up displays, and FEDs. FEDs are known to have an excitation source which has an excitation potential that is less than about 5 kV and the claimed structure and CRTs for televisions are known to have the claimed structure and an excitation source which has an excitation potential in the range of 20-30 kV. Accordingly, one of ordinary skill in the art would have found it obvious to use the claimed phosphors of U.S. Patent No. 6,168,731 in any of the taught cathodoluminescent devices. The claims do not teach the amount of Ce and Tb in the yttrium silicate phosphors, but one of ordinary skill in the art would know the amount is that effective to produce cathodoluminescent. This amount is generally 20 at% or less, which overlaps the claimed range.

Applicants' comments with respect to the terminal disclaimers are noted.

Art Unit: 1755

Claim 139 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The claimed projection CRT is not taught or suggested by the cited art of record.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (703) 308-3817. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at (703) 308-3823.

Art Unit: 1755

The fax number for Amendments filed under 37 CFR 1.116 or After Final communications is (703) 872-9311. The fax number for all other official communications is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661 or (703) 308-0662.

cmk
August 1, 2003


C. Melissa Koslow
Primary Examiner
Tech. Center 1700